

Remarks

This REQUEST FOR CONTINUED EXAMINATION and REPLY is in response to the Office Action mailed December 8, 2008, an Advisory Action mailed February 24, 2009, and an interview with Examiner Jason Mitchell on March 10, 2009.

I. Applicant's Interview Summary

Applicant acknowledges the courtesy of an interview with Examiner Jason Mitchell and Applicant's representatives Karl Kenna and Nathan Feld on March 10, 2009. During the course of the interview several proposed amendments to the claims were discussed, the substance of which proposed amendments are set forth fully herein, and also in the Examiner's Interview Summary mailed March 11, 2009. No agreement was reached. The Examiner indicated that further consideration would be made upon receipt of this reply.

II. Summary of Examiner's Rejections

In the Office Action mailed December 8, 2008, Claims 8 and 15 were objected to because of informalities. Claims 1-3, 6-10, 13-17, and 20-24 were rejected under 35 U.S.C. 103(a) as being unpatentable over McNeely et al. (U.S. Patent No. 7,117,411 hereafter McNeely) in view of Dubovsky (U.S. Patent Publication No. 2003/0055836).

III. Summary of Applicant's Amendment

The present Reply amends Claims 1, 8, and 15, cancel Claims 16-17, and add Claims 25-26, leaving for the Examiner's present consideration Claims 1-4, 6-11, 13-15, 18, and 20-26. Reconsideration of the Application, as amended, is respectfully requested.

IV. Claim Objections

In the Office Action mailed December 8, 2008, Claims 8 and 15 were objected to because of informalities. Claims 8 and 15 were amended in the Response to Final Office Action filed February 9, 2009 and indicated as entered in the Advisory Action mailed February 24, 2009. Applicant respectfully submits that Claims 8 and 15 now conform to Examiner's objections and reconsideration thereof is respectfully requested.

V. Claim Rejections under 35 U.S.C. 103(a)

In the Office Action mailed December 8, 2008, Claims 1-3, 6-10, 13-17, and 20-24 were rejected under 35 U.S.C. 103(a) as being unpatentable over McNeely (U.S. Patent No. 7,117,411 hereafter McNeely) in view of Dubovsky (U.S. Patent Publication No. 2003/0055836).

Claim 1

Claim 1 has been amended to more clearly define the embodiment therein. As amended, Claim 1 defines:

1. *(Currently Amended) A system that provides a generic user interface testing framework, and allows a user to test and debug graphical user interfaces for software applications under development, comprising:*

a computer including a computer readable medium, and a processor operating thereon;

a software application source code, stored on the computer readable medium, wherein the software application source code defines a software application under development, including a graphical user interface as part of the software application, and wherein the software application source code executes on the computer to display its graphical user interface;

a plurality of different software test tools, wherein each software test tool is operable to test a plurality of different graphical user interfaces for a plurality of different software applications and wherein each software test tool is associated with a different tool-specific scripting language, that can be invoked by a user to perform testing operations on the graphical user interface that is displayed while the software application is running, and wherein each of the plurality of different software test tools use only their associated tool-specific scripting language to test the plurality of different graphical user interfaces associated with the plurality of different software applications;

a test case input file stored on the computer readable medium, that contains a plurality of generic interface commands that are abstractions independent of any of the tool-specific scripting languages, wherein the test case input file can be edited and reused as necessary by the user to specify different generic interface commands for testing against a software application's graphical user interface in any of the different software test tools; and

an interpretive engine that executes on the computer, and that includes a plurality of dynamically loaded libraries corresponding to the plurality of different software test tools, and including at least one library for each of the plurality of different software test tools wherein each library is a group of functions written in each tool-specific scripting language, wherein the interpretive engine receives the generic interface commands defined in the test case input file, identifies which libraries are required, loads the required libraries associated with the software test tool the user is currently using, maps the generic interface commands to the software test tool's associated tool-specific scripting language, uses the software test tool to perform the testing operations on the software application's graphical user interface using the associated tool-specific scripting language, and reports to the user the success or failure of the testing operations.

Claim 1, as amended, defines that each software test tool is operable to test a plurality of different graphical user interfaces for a plurality of different software applications. Claim 1, as amended, further defines at least one library for each of the plurality of different software test tools wherein each library is a group of functions written in each tool-specific scripting language, wherein the interpretive engine receives the generic interface commands defined in the test case input file, identifies which libraries are required.

McNeely discloses that from an operational perspective, there exists a need for the capability for users in a network environment to share test cases and test case results for multiple devices under test in a test network environment. (Column 3, lines 28-31). According to an important aspect of the invention, these device-specific classes include functions that translate generic commands to device-specific commands. (Column 13, lines 58-60).

Dubovsky discloses methods for generating data structures for use with an environment based data driven test engine for computer programs which have a graphical user interface (GUI). (Abstract). Dubovsky also discloses that a disadvantage of most GUI testing tools, including WinRunner®, is that a separate test script must be created for each GUI application feature. (Paragraph [0009]).

Applicant respectfully submits that McNeely appears to describe a test tool that can test multiple devices on a network. Since each device may have its own device-specific testing language, McNeely suggests using a tool that is device-generic (i.e., that can be used with different devices having different device-specific testing languages). McNeely appears to describe a test tool which translates device-generic commands to device-specific commands based on the device that is currently being tested. Thus, the user is only required to know the test-tool commands that are specific to the test tool described in McNeely, rather than the various device-specific commands for each device he intends to test.

However, Claim 1, as amended, defines that each software test tool is operable to test a plurality of different graphical user interfaces for a plurality of different software applications. Applicant respectfully submits that the plurality of test tools disclosed in McNeely are each *device-specific*, and are not operable to test *different* devices. As such, Applicant respectfully submits that McNeely, in view of Dubovsky, does not disclose or render obvious that each software test tool is operable to test a plurality of *different* graphical user interfaces for a plurality of *different* software applications, as defined by Claim 1.

Furthermore, Claim 1 defines that each *software test tool* is operable to test a *plurality* of different graphical user interfaces for a plurality of different software applications and that each software test tool is associated with a different tool-specific scripting language. Additionally,

Claim 1 defines a *test case input file* stored on the computer readable medium, that contains a plurality of generic interface commands that are *abstractions independent of any of the tool-specific scripting languages*. The test case input file can be used with a plurality of software test tools which, as described above, can be used to test a plurality of different GUIs. The embodiment of Claim 1 provides more than one abstraction, for example one abstraction from a plurality of different GUIs for a plurality of different software applications to each software test tool; and another abstraction from each software test tool to a test case that includes commands that are abstractions independent of any of the tool-specific scripting languages. Applicant respectfully submits that neither McNeely nor Dubvosky, alone or in combination, discloses or renders obvious more than one generic abstraction.

Claim 1 has been further amended to define at least one library for each of the plurality of different software test tools wherein each library is a group of functions written in each tool-specific scripting language, wherein the interpretive engine receives the generic interface commands defined in the test case input file, identifies which libraries are required. Applicant respectfully submits that McNeely, in view of Dubovsky, does not disclose or render obvious these features.

In view of the above comments, Applicant respectfully submits that Claim 1 is neither anticipated by nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claims 8 and 15

The comments provided above with respect to Claim 1 are hereby incorporated by reference. Claims 8 and 15 have been amended similarly to Claim 1. For similar reasons as provided above with respect to Claim 1, Applicant respectfully submits that Claims 8 and 15 are likewise neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claims 2-4, 6-7, 9-11, 13-14, 16-18, 20-21, and 22-24

Claims 2-4, 6-7, 9-11, 13-14, 16-18, 20-21, and 22-24 depend from and include all of the features of Claims 1, 8, or 15. Applicant respectfully submits that Claims 2-4, 6-7, 9-11, 13-14, 16-18, 20-21, and 22-24 are allowable as depending from an allowable independent claim and further in view of the comments provided above. However, to assist the Examiner in examining these claims, Applicant has provided comments below on several of these claims.

Claims 7, 14, and 21 define wherein any of the software test tools can be removed and replaced with another software test tool. It was asserted in the Office Action that McNeely discloses this feature. Applicant respectfully traverses this assertion. McNeely discloses that communication with GUI-based devices can occur via a graphical user interface if a suitable GUI tester is added via a new package. (Column 13, lines 47-49). McNeely appears to describe a test tool that can test multiple devices on a network. Since each device may have its own device-specific testing language, McNeely suggests using a tool that is device-generic. McNeely further appears to disclose that the test tool can also test GUI-based devices by adding a new package. Accordingly, Applicant respectfully submits that McNeely discloses device-specific software test tools and a single device-generic tool for testing multiple devices. The software test tools described by McNeely do not appear capable of testing different devices; and therefore cannot be replaced with another software test tool since the result would be nonfunctional. As such, Applicant respectfully submits that McNeely, in view of Dubovsky, does not disclose or render obvious that any of the software test tools can be removed and replaced with another software test tool, as defined by Claims 7, 14, and 21.

Claims 22-24 define that the system defines a contract interface for use as an entry point in loading the libraries corresponding to the plurality of different software test tools, and wherein additional software test tools that use a different scripting language can be dynamically plugged into the system at the entry point by defining an execution interface of those additional software test tools to comply with the contract interface. In the Office Action, it was asserted that McNeely discloses this feature. Applicant respectfully traverses this assertion. McNeely appears to disclose packages that include procedures to enable a user to create a test case using generic commands. The procedures in the package appear to access the device specific commands. However, McNeely does not appear to disclose either a contract interface for use as an entry point or an execution interface of the additional software test tools that complies with the contract interface. As such, Applicant respectfully submits that McNeely, in view of Dubovsky, does not appear to disclose or render obvious these features.

Claims 2-4, 6, 9-11, 13, 16-18, and 20 have not been addressed separately but it is respectfully submitted that these claims are allowable as depending from an allowable independent claim, and further in view of the comments provided above. Reconsideration thereof is respectfully requested.

VI. Additional Amendments

Claims 25-26 have been newly added by the present Response. Applicant respectfully requests that new Claims 25-26 be included in the Application and considered therewith.

VII. Conclusion

In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and reconsideration thereof is respectfully requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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